Sunday 15 September 2019 - Saturday 28 September 2019
Babeș-Bolyai University

Academic programme
The complete programme will offer more than 55 hours of lectures and hands-on exercises. The programme is organized over three distinct tracks: Physics Computing, Software Engineering, and Data Technologies.

**Physics Computing**

* **Introduction to Physics Computing**
  *by Arnulf Quadt (University of Göttingen)*
  2h lectures

* **Data Analysis**
  *by Ivica Puljak (University of Split)*
  4h lectures + 3h exercises

* **Machine Learning**
  *by Anna Scaife (University of Manchester)*
  3h lectures + 3h exercises

* **Data Science tools for interactive exploration**
  *by Bob Jacobsen (UC Berkeley)*
  1h lecture

**Software Engineering**

* **Software Design in the Many-Cores Era**
  *by Enric Tejedor (CERN) and Andrei Gheata (CERN)*
  4h lectures + 3h exercises

* **Tools and Techniques**
  *by Bob Jacobsen (UC Berkeley)*
  2h lectures + 5h exercises

* **Creating Secure Software**
  *by Sebastian Lopienski (CERN)*
  3h lectures + 3h exercises

**Data Technologies**

* **Data Management**
  *by Alberto Pace (CERN)*
  5h lectures

* **Data and Storage Technologies**
  *by Andreas J. Peters (CERN)*
  1h lecture + 4h exercises

* **Data Visualization**
  *by Eamonn Maguire (Pictet Asset Management)*
  2h lectures + 2h exercises

* **Networking Fundamentals**
  *by Francois Fluckiger (CERN)*
  2h lectures

**Additional lectures**

On top of the academic programme of the School, there are four guest lectures scheduled: * **Computational Science - The Third Pillar of Science?**
  *by Emil Slusanschi (Politehnica University of Bucharest)*
  **Physics-inspired computer algorithms**

* **Using MPI and OpenMP in building High Performance Applications**
  *by Liliana Teoforescu (Brunel University)*
  **Industrial applications of data science**

* **Computation for Industry**
  *by Cosmin Lazar (Bosch)*
  There will be also a session of short student presentations. Finally, two special evening talks will be given by CSC lecturers: * **When Internet history meets philosophy**
  *by Francois Fluckiger (CERN)*
  **Future of the Universe and of Humanity**
*by Ivica Puljak (University of Split)*